

## **News from Europe (May 2007)**

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### **Our rich European diversity: a challenge to meet together EWDA Chairperson's Corner**

With this message I would like to introduce myself as the new Chairperson of the European section of the Wildlife Disease Association (EWDA). I am Dolores Gaviera-Widén, a wildlife pathologist living in Sweden, originally from Argentina and a member of the WDA since 1988. I will always be indebted to Marc Artois, one of the founding members and many-years-leader of the EWDA section. It is not easy to follow Marc, but I shall try my best with this exciting and challenging task. I know I can count on the support of our EWDA Board, which is formed by a wonderful blend of different nationalities, languages, cultures and scientific backgrounds. The Board is actually a good representation of European diversity. 'Our Europe', which in the 27 countries of the European Union (EU) alone, has 494 million inhabitants and 23 official and working languages. Our Europe, of biodiversity, with more than 200 species of mammals, 500 of birds and 190 of reptiles and amphibians. Our Europe with a wide range of ecosystems and climate, from the subtropical Mediterranean to the polar by the Arctic Ocean.

In the old days, diversity often implied barriers. Divisions were imposed by language, politics, economy, and other factors. Today many of these barriers have fallen, or have revealed openings. Today the ease of communication has provided wonders. European-wide wildlife related problems are now frequently treated as one whole by different types of organizations for example by the EU, OIE and IUCN (The World Conservation Union). Surveillance and research activities are now more international. Collaboration with European Eastern countries is now easier, and is a priority in our EWDA agenda. Cultural differences, however, will remain longer, which in my opinion is positive, as they add spice and touches of humour to our work, and encourage us to better understand each other.

Wild animals however, if allowed to move freely, see no barriers, nor do the infectious agents they carry. Our wildlife disease problems often affect large areas across countries, as the examples of bovine tuberculosis or highly pathogenic avian influenza demonstrate. The diversity of pathogens so far identified affecting our European fauna, is very broad. And the list of infectious agents that have not yet been identified might, with time, prove to be very long. Indeed previously unknown pathogens, for example the calicivirus causing hepatitis of leporids, have been discovered in recent years. The field of wildlife diseases in Europe is therefore still relatively unexplored.

At the same time, a variety of man-made wildlife-disasters continue. The list under this category is too long to name here, but, loss of environment, climate changes, introduction or movement of pathogens, inappropriate management of domestic and

wild animal populations, contaminants and rubbish in our land and water, are some examples. Another type of diversity that is characteristic of the work on wildlife is the variety of disciplines involved. This can be understood by looking at how broad the focus of WDA is: endangered species, wildlife conservation, relocation and rehabilitation, comparative medicine, public health, game, furbearing and zoo animals, livestock and poultry, and ecosystem health. Obviously, each of us can only contribute with one piece of the complex puzzle.

The interest on wildlife diseases in Europe is increasing, particularly among young scientists. The impact of wildlife diseases, not only on wild animals but also on humans, food animals, and on the environment is also becoming more evident. We have plenty of work to do together, as wildlife diseases are like thousand-bits puzzles. Therefore, I invite you to remain as a member of EWDA, or to join us if you are not already a member. Let us all work together for wildlife health in Europe.

I would like to very specially thank the board of EWDA for their very dedicated and voluntary work, the student chapter of EWDA for their endless enthusiasm, and our "mother" association, the WDA, for giving us a base and their support for our European branch. Please visit our website ([www.ewda.org/](http://www.ewda.org/)) kindly provided by the UK Central Science Laboratory. To join the EWDA you need to become a member of WDA ([www.wildlifedisease.org/](http://www.wildlifedisease.org/)). You are welcome to send us comments, questions and ideas, and to participate in our activities.

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### **History of EWDA: our founding members**

Back in 1992/1993, a group of European scientists working on wildlife met to discuss the possible creation of a European section of WDA. In those days, and for many years, a main event bringing together wild- and zoo- animal scientists from Western and Eastern Europe had been the annual "Erkrankungen der Zootiere" conferences, organized by with Dr Rudolph Ippen and Hans-Dieter-Schröder, from Berlin. The group proposed setting up the European WDA (EWDA) section as a branch of the WDA. The activities of Dr Ippen and Schröder would be integrated in the new organization.

A request for the creation of a new section was submitted to the WDA council. The founding group of EWDA resulted, with Torsten Mörner (Sweden) as chairman, Thijs Kuiken (The Netherlands) as secretary, Marc Artois (France) as treasurer, and Seamus Kennedy (UK) as the Newsletter Editor. James Kirkwood (UK) also participated in the initiative group. Marc Artois took over the chairmanship of EWDA in 2002.

Thijs Kuiken, The Netherlands

## **Summary of Avian Influenza surveillance in wild birds in Europe; winter 2006/07**

The last detection of highly pathogenic avian influenza virus (HPAIV) of subtype H5N1 in wild birds in Europe occurred in early August 2006, when a juvenile black swan (considered as a wild bird) from the zoo of the city of Dresden (Germany) was found positive. Despite intensive follow-up investigations, no further cases were reported from the zoo. Prior to the first detection of HPAI H5N1 in Central and Southern Europe in February 2006, surveillance was similar in intensity in winter 2005/2006 as in the winter 2006/2007. However, surveillance increased sharply after detection of the first HPAI H5N1 infected wild birds.

Since the swan in Dresden zoo, HPAIV H5N1 has not been detected in wild birds in Europe. However, H5N1 infections occurred in early 2007 in two Hungarian geese holdings (mid to late January) and in a large turkey holding in the United Kingdom (late January-early February). Temporally and phylogenetically these geographically widely separated outbreaks in poultry are nevertheless closely linked, although the basis of this linkage (fomite transmission vs. trade with infected poultry vs. wild birds) could not be identified exactly (Defra, 2007). Wild birds are thought to be an unlikely source for the UK outbreak but are considered the origin for the Hungarian incident. Further outbreaks among poultry in live poultry markets have also been reported from the Moscow area, Russia, in mid March. All outbreaks were reportedly swiftly contained, and intensified investigations of local wild bird populations apparently did not yield evidence for the presence of HPAIV H5N1.

Despite continuously negative results from monitoring investigations in wild birds (in Germany more than 5.500 wild birds have been examined since January 2007) a small, statistically based, chance remains for an ongoing, conceivably clustered presence of the virus at very low prevalence in European wild bird populations.

Reference - DEFRA (2007). Influenza in Suffolk in January 2007. A Report of the epidemiological findings by the National Emergency Epidemiology Group. Defra. 5 APRIL 2007  
([http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/epid\\_findings050407.pdf](http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/epid_findings050407.pdf))

Prof. Dr. Thomas C. Mettenleiter, President PD Dr. Timm Harder, Head of OIE and National Reference Laboratory for Avian Influenza, Friedrich-Loeffler-Institut, Federal Research Institute for Animal Health, Boddenblick 5A, 17493 Greifswald-Insel Riems, Germany.

## **Emerging Flaviviruses in Central-European Wild Birds**

Viruses of the family *Flaviviridae* (i.e. West Nile Virus (WNV), Japanese Encephalitis Virus, and Murray Valley Virus) have considerable contemporary veterinary- and public-health impact. In a European context, WNV is the most studied member of this group and the regular presence of WNV on the European continent is demonstrated by multiple WNV outbreaks among horses and humans over the past decades.

**WNV** Despite the serological evidence, there are few records of natural infection, clinical disease or mortality caused by WNV in European wild bird populations. WNV has been eventually isolated from a dead magpie (*Pica pica*) and a sparrow (*Passer sp.*) in the Camargue, France in 2004. A WNV strain causing severe encephalitis has emerged in goshawks (*Accipiter gentilis*) and sparrowhawks (*Accipiter nisus*) in South-Eastern Hungary in 2004 and 2005, and now there is evidence for the presence of WNV from 2003. The isolated Hungarian virus strains all belong to lineage 2 of WNV, the members of which have previously only been detected in Sub-Saharan Africa, apart from a recently characterized virus strain Q3574-5 isolated in 1968 from a migrating Barred Warbler (*Sylvia nisoria*) on Cyprus. The detection of the infection and of a genetically almost identical virus strain within the same area in three consecutive years suggests that WNV may be present here, in Hungary, in an endemic infectious cycle. In 2003 a single event Lineage 1 WNV outbreak affected an immune-suppressed goose flock 200 km to the West of this area but no further Lineage 1 WNV activity has been detected since. A comparison with the emergence and spread of WNV in North America highlights the fact, that Palaearctic bird species seem to be much less affected by WNV induced clinical disease. The long coexistence or regular exposure of European bird species to WNV may have resulted in decreased susceptibility to WNV infection. The fact that clinical disease has so far only been detected in resident raptor species with relatively small home ranges (goshawks and sparrowhawks) could also support this hypothesis.

**Usutu virus** Usutu virus (USUV) was first isolated in South Africa, from *Culex neavei* mosquitoes in 1959 followed by isolation in several African countries from other mosquito species, wild birds, rodents, and on one occasion from a man. The virus emerged in Austria in 2001 and caused serious die-offs around Vienna in wild birds, especially blackbirds (*Turdus merula* L.). The virus was presumably introduced from Africa by migratory birds, and it successfully adapted to the Central European host and vector species, and became a resident pathogen in Austria. In the following four consecutive years, enzootics of USUV in wild birds were observed mainly between mid-summer and mid-autumn in the eastern federal states of Austria. Compared to previous years, the wild bird mortality rate declined from 2005; while rates of sero-positivity against USUV increased. USUV infection and mortality was next detected in blackbird populations in Budapest, Hungary during the summer of 2005 and 2006. Genetic studies revealed little variation between Austrian and Hungarian isolates. A North-Western spread of the virus became evident in 2006 when USUV-related blackbird and domestic sparrow (*Passer domesticus*) mortality was detected in Zürich, Switzerland. Owl species at Zürich zoo were affected at the same time. An USUV outbreak also occurred during summer 2006 at an owl sanctuary in Northern Italy.

These findings indicate that the current environmental changes affecting the spatial and temporal distribution patterns of migratory and resident birds and arthropod vectors may result in further spread of flaviviruses in Europe.

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**New wildlife disease network in Spain**

A wildlife disease network has been set up in Spain to coordinate research, education and other activities related to wildlife disease. The network, supported by the INIA (Spanish Institute for Agricultural Research) is particularly focused on diseases shared between wildlife, humans and domestic animals. It will organise national and international meetings and wildlife disease conferences, as well as workshops on specific issues. It has a website hosted by the National Wildlife Research Institute IREC (<http://www.uclm.es/irec/investigacion/grupos/sanidadanimal/riec/>), and runs a mailing list hosted by the Spanish research network REDIRIS. This mailing list (in Spanish) helps in the exchange of news and comments on wildlife disease-related issues, not just in Spain but elsewhere. To join the mailing list, please write [Christian.Gortazar@uclm.es](mailto:Christian.Gortazar@uclm.es)

**The Second EWDA Student Workshop** was held from April 26<sup>th</sup> to 29<sup>th</sup>, 2007 at the Athena Pallas Village, in Sithonia, Greece, and met with a great success!

The Second EWDA Student Workshop was organized by the European Student Chapter of the Wildlife Disease Association on the theme of Wildlife Conservation and the Threat of Infectious Diseases. Meant to offer advanced undergraduates and graduate students the opportunity to meet and interact with leaders in the field of wildlife disease research and wildlife conservation, twelve internationally renowned scientists were invited to present lectures, and lead working sessions and panel discussions within the frame on the 'One World – One Health' approach. Sixty student participants from 17 countries from Europe and beyond shared with great enthusiasm the experience and knowledge of the invited speakers. Twenty-five posters gave an overview of the students' current research projects, and a prize offered by the Wildlife Trust was awarded to the best poster, presented by Amber Teacher on microsatellite genotyping of common frog populations affected by ranaviruses. The Second EWDA Student Workshop was supported by the Wildlife Disease Association and its European section, and the Field Veterinary Program of the Wildlife Conservation Society. It was sponsored by the Piraeus Bank, Pfizer, EVL, Viroclinics, Novartis Animal Health Inc., Merial, Intervet International, Roche, and the University of Utrecht. The following Patron Institutions graciously contributed to the program of the Second EWDA Student Workshop: the Erasmus Medical Centre, the Hellenic Society for the Study and Protection of the Monk Seal, IREC – Research Institute on Game Biology, Princeton University, the University of Cambridge, the University of Edinburgh, the University of Oxford, the University of Pretoria, the Veterinary School of Lyon, and the Wildlife Trust.

To learn more about the Second EWDA Student Workshop, please visit the EWDA website at [www.ewda.org](http://www.ewda.org).

Miriam Mass, The Netherlands

**Meetings** – we give notice of two important meetings.

- Wildlife disease management. The Central Science Laboratory, York, England, November 2007. This meeting at an excellent research institute, will cover the most recent innovations in wildlife disease management in Europe.

- **8th Conference of the European Wildlife Disease Association, Rovinj, Croatia, October 2-5, 2008.** The European Wildlife Disease Association will hold its biennial

conference on the Adriatic coast, in Rovinj, Croatia. From the furthest eastern slopes of the Alps in the north-west to the Pannonian lowlands in the east; divided by the Dinara mountain range, extending to the sapphire coloured coast of the Adriatic Sea. Despite its modest size, in terms of its biodiversity Croatia ranks among the top five countries in Europe, with some of its localities being of global importance.

The Croatian Veterinary Institute on behalf of the EWDA invites members and others interested in all aspects of wildlife disease and in promoting wildlife health to attend this conference. Veterinarians, pathologists, zoologists, wildlife biologists, epidemiologists, ecologists, and any person interested in the wildlife health should attend and join together in a challenging opportunity to discuss the imminent issues surrounding wildlife disease. Associates from an array of animal and human health fields should also attend promoting and sharing knowledge among professionals, discussing hot topics. As we invite you to Croatia, we want you to share with us the taste, the feeling, and the spirit of "The Mediterranean as It Once Was". More information on the conference program, web page, and important dates will follow in the next issue. For further information, please contact Ivan Vickovic at [ivickovi@hotmail.com](mailto:ivickovi@hotmail.com).